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REMARKS

Claims 1-20 are all the claims presently pending in the application. Claims 1, 8, and 20 are independent.

Applicant also notes that, notwithstanding any claim amendments herein or later during prosecution, Applicant's intent is to encompass equivalents of all claim elements.

Claims 1, 3, 6-9, 11-12, 14, 16, 18, and 20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson, et al. (USPN 5,465,404), in view of Wing (USPN 5,570,373). Claims 2, 4, and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson, et al., in view of Wing, and in view of Ganesan, et al. (USPN 5,812,951). Claims 5 and 13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson, et al., in view of Wing, and in view of Crnkovic, et al. (USPN 5,815,805). Claims 17 and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson, et al., in view of Wing, and in view of Lehtinen, et al. (USPN 5,852,603).

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention is directed to a portable telephone set, including a detachable transmission module, and a transmitting circuit adapted to transmit in a transmission frequency signal in accordance with instructions in a predetermined software program. The detachable transmitting module conditions the transmission frequency signal received from the transmitting circuit.

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Conventional software portable telephone sets are reconfigurable for different transmission systems by replacing the operating program that is required by the wide-band active and passive components in order to cope with a plurality of different systems. However, any increase in frequency band coverage is accompanied by a corresponding deterioration in characteristics.

This deterioration is particularly evident on the transmission side of the system. More particularly, it has been particularly difficult to maintain a high efficiency for a transmitting power amplifier over a wide frequency band.

Similarly, it is difficult to increase frequency band coverage without loss in transmission signal filters and isolators.

The present invention overcomes these difficulties by providing a portable telephone set with a detachable transmission module that conditions a transmission frequency signal received from a transmitting circuit. In this manner, the present invention provides the ability to condition the transmission frequency signal which may have been generated by a wide band frequency generating circuit to correct any deficiencies in that transmission signal.

In one embodiment of the present invention, the conditioning performed by the detachable transmission module corresponds to a specific transmission system.

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II. THE PRIOR ART REJECTIONS

A. The Thompson reference in view of the Wing reference

Regarding claims 1, 3, 6-9, 11-12, 14, 16, 18, and 20, the Examiner alleges that the Wing reference would have been combined with the Thompson reference to form the claimed invention. Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, the references are directed to completely different matters and problems.

Specifically, the Thompson reference is directed to addressing the need for providing a communication system which enhanced data handling, secure two-way communication, and enhanced information presentation along with an easy to operate and understand communication device (col. 2, lines 43-48).

In stark contrast, the Wing reference is specifically directed to identifying a failure condition in a radio of a base station without incurring the extra cost of an indirect radio test unit (col. 1, lines 35-46) and the cost of manufacturing a radio test unit that is included in the base station (col. 1, lines 47-56).

One of ordinary skill in the art who was concerned with providing a communication system with enhanced data handling, secure two-way communication, and enhanced information presentation along with an easy to operate and understand communication device as the Thompson reference is concerned with providing would not have referred to the Wing reference

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because the Wing reference is concerned with the completely different and unrelated problem of identifying a failure condition. Thus, the references would not have been combined, absent hindsight.

Further, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner.

The Examiner alleges that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Thompson's system with Wing's disclosed technique in order to provide a convenient software portable telephone set that can condition a transmission frequency signal for correcting any fault, if any, as taught by Wing."

Firstly, contrary to the Examiner's allegation, the Wing reference does not teach or suggest conditioning a transmission frequency. Rather, the Wing reference discloses identifying a failure condition in a radio of a base station by evaluating statistical data associated with wireless communications in the network (col. 1, lines 60-64). As explained in more detail below, there is no mention anywhere within the Wing reference of anything that is even remotely related to conditioning a transmission signal.

Secondly, the Wing reference discloses identifying a fault in a base station and has absolutely nothing to do with identifying a failure in a portable telephone set. The Thompson reference is only concerned with a portable telephone set and has absolutely nothing to do with identifying a failure condition in a base station as the Wing reference is dedicated to identifying. Therefore, one of ordinary skill in the art who was concerned with identifying a fault in a base station as disclosed by the Wing reference would not have been motivated to modify the portable

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telephone set that is disclosed by the Thompson reference because the portable telephone set is not a base station.

Moreover, even assuming arguendo that one of ordinary skill in the art would have been motivated to combine these references, the combination would not teach or suggest each and every element of the claimed invention.

None of the applied references teaches or suggests the features of the claimed invention including: 1) a transmitting circuit that is reconfigured afresh in relation to the mounting and demounting of the transmitting function part (claim 1); and 2) a detachable transmitting function part that conditions a transmission frequency signal received from the transmitting circuit (claims 1, 8, and 20). As explained above, these features are important for providing the ability to condition the transmission frequency signal which may have been generated by a wide band frequency generating circuit to correct any deficiencies in that transmission signal (see, for example, page 3, lines 3-15).

Contrary to the Examiner's allegation, the Thompson reference does not teach or suggest a transmission circuit that is reconfigured afresh in relation to the mounting and demounting of the transmitting function part as recited by independent claim 1.

Indeed, the Thompson reference does not teach or suggest a transmission circuit that is reconfigured, let alone a transmission circuit that is reconfigured afresh in relation to the mounting and demounting of the transmitting function part.

The Examiner cites col. 3, line 52 through col. 4, line 2 of the Thompson reference in an attempt to support the Examiner's allegation that the Thompson reference discloses a

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transmission circuit that is reconfigured afresh in relation to the mounting and demounting of the transmitting function part.

However, col. 3, line 52 through col. 4, line 2 of the Thompson reference clearly explains that "separate application modules are available to allow maximum use of the electromagnetic energy spectrum. For example, one application module may allow the communication device to operate at the required frequency and with appropriate protocols for a convenient cellular telephone network. Another application module may have the required frequency and protocols to allow the communication device to function as a cordless telephone. . . . The present invention allows for simply removing one application module and inserting another application module to allow use of multiple communication networks by each personal communication device."

In other words, col. 3, line 52 through col. 4, line 2 of the Thompson reference clearly explains that each "separate" application module incorporates features and protocols for different networks. Therefore, rather than reconfiguring any transmission circuits, the Thompson reference discloses separate and independent application modules which each incorporate entire transmission circuits that are specifically configured for a corresponding type of transmission protocol. Thus, contrary to the Examiner's allegations, the Thompson reference does not teach or suggest reconfiguring anything, but instead discloses replacing application circuits, none of which are "reconfigured."

The Examiner admits that the Thompson reference does not teach or suggest a detachable transmitting function part that conditions a transmission frequency signal received from the transmitting circuit.

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The Wing reference does not remedy the deficiencies of the Thompson reference.

Firstly, the Wing reference does not teach or suggest a transmitting circuit that is reconfigured afresh in relation to the mounting and demounting of the transmitting function part. Indeed, the Wing reference does not even teach or suggest a mountable/demountable transmitting function part, let alone a mountable/demountable transmitting function part that conditions a transmission frequency signal received from a transmitting circuit.

Secondly, contrary to the Examiner's allegations, the Wing reference does not teach or suggest monitoring mobile stations, "and based on that monitoring process, the transmitting circuit can be conditioning, i.e. software update or re-programming, the transmission frequency signal received from the transmitting circuit of the mobile station."

Indeed, contrary to the Examiner's allegations, the Wing reference does not teach or suggest anything at all about conditioning the transmission frequency signal received from the transmitting circuit of the mobile station. Rather, the Wing reference is only concerned with "identifying a failure condition in a radio of a base station." (Emphasis added, col. 1, lines 60-63).

The Wing reference discloses that "[a]ccording to the present invention, data representative of selected call processing activities are collected at a base station and a mobile station in a wireless network during the course of a wireless communication to provide for testing a radio in the base station without removing the radio from service . . . The present invention provides the advantage that the frequency for testing a radio in the network 10 is not limited by the stringent cost considerations with removing a radio from service for testing a

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separate RTU.” In other words, the Wing reference discloses collecting data to identify a failure condition in a radio of a base station.

The Examiner cites Figures 3A and 3B; col. 5, line 50 to col. 6, line 33; col. 7, line 49 to col. 8, line 21; and col. 9, lines 4-45 of the Wing reference in an attempt to support the Examiner’s allegation that the Wing reference discloses conditioning a transmitting circuit based upon a monitoring.

Contrary to the Examiner’s allegations, col. 5, line 50 through col. 6, line 33 of the Wing reference does not teach or suggest conditioning a transmitting circuit based upon a monitoring. Rather, this portion of the Wing reference explains that “call processing activities associated with maintaining a wireless communication linkage and transmitting voice information signals between the base station 40 and the mobile station 60 are monitored by the processors 44 and 64 of the base station 40 and the mobile station 60, respectively. The call processing activities which are typically monitored include . . activities occurring on or associated with overhead channels, such as the establishment or severance of a voice connection . . . [and] those activities concerning the transmission of information on traffic channels, such as the level of communication activity . . , the duration of completed wireless transmission, severance of a voice connection . . and the percentage of voice information data transmitted in error per frame of voice data.” (Col. 5, line 50 - col. 6, line 4)

Then, as explained above, the Wing reference explains at col. 6, lines 5-33, that this data is used to determine whether a radio 44 in the base station 40 is faulty.

The Wing reference explains the process of identifying whether a radio in a base station is

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faulty with reference to Figs. 3A and 3B and col. 6, line 25 - col. 10, line 25).

In particular, the Wing reference explains that in step 102, the detector 50 probes the processor to determine whether a wireless call is in progress to a mobile station (col. 6, lines 63-65). Once a communication has been identified as being in progress, the Wing reference explains that the counters in the mobile station that are used to store statistical data that include the call processing activities that were described above are reset in the mobile station 60 in step 110 (col. 7, lines 26-48).

The Wing reference next explains that, after a preset interval has passed while the call continues, the data that was stored by the mobile station during that preset interval is reported and stored in steps 112 and 114. (Col. 7, line 49 - col. 8, line 21).

The Wing reference explains that an error frame rate is computed using the stored values in step 116 (col. 8, lines 22-31) and that, if the error frame rate exceeds a predetermined threshold, a counter is incremented in steps 118 and 120 (col. 8, lines 31-52).

The Wing reference further explains that an increment counter is used to prevent false indications of a faulty operation condition at the base station because "it is known that environmental interference or a faulty operating condition at a mobile station may cause errors in the transmission between a radio and a mobile station which can contribute to the determination of a high computed error rate value" and that "channel operation of the radio 44 is tested for several iterations with different mobile stations to minimize the probability that a failure condition is incorrectly declared." (Col. 8, lines 52-64).

"Assuming that the iteration limit is reached in step 126, the indicator 54 provides an

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indication that a failure condition is present at the radio for operation on the downlink traffic channel.” (Col. 9, lines 32-36).

Col. 6, line 63 through 9, line 45 and Figure 3A of the Wing reference describes a process for identifying a faulty radio in a base station of a downlink traffic channel and col. 9, line 46 - col. 10, line 25 explains in reference to Figure 3B a very similar manner of identifying a faulty radio in a base station of an uplink traffic channel.

Therefore, contrary to the Examiner’s allegations, Figures 3A and 3B; col. 5, line 50 to col. 6, line 33; col. 7, line 49 to col. 8, line 21; and col. 9, lines 4-45 of the Wing reference do not teach or suggest anything at all regarding conditioning a radio frequency based upon monitoring. Rather, the Wing reference only discloses a process for identifying a failure in a radio of a base station.

Moreover, the Wing reference does not teach or suggest “A software portable telephone set comprising: a detachable transmitting function part; . . . [that] conditions a transmission frequency signal received from said transmitting circuit” that also forms a portion of the portable telephone set as recited, for example, by claim 1.

Rather, as explained above, the Wing reference only discloses a process for identifying a failure in a radio of a base station and has absolutely nothing to do with conditioning of a transmission signal within a portable telephone set.

Indeed, as explained by the Wing reference at col. 8, lines 52 - 64, the process for identifying a failure condition of a radio of a base station maintains an iteration count, specifically for the purpose of preventing any failure or conditioning that may be occurring at a

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mobile station from affecting the ability to identify a failure at a radio in a base station.

Therefore, the Examiner is respectfully requested to withdraw the rejection of claims 1, 3, 6-9, 11-12, 14, 16, 18, and 20.

B. The Thompson reference in view of the Wing reference and further in view of the Ganesan et al. reference

Regarding claims 2, 4, and 10, the Examiner alleges that the Wing reference would have been combined with the Thompson reference and further that the Ganesan et al. reference would have been combined with the combination of the Thompson reference and the Wing reference to form the claimed invention. Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, the references are directed to completely different matters and problems.

As explained above, one of ordinary skill in the art who was concerned with providing a communication system with enhanced data handling, secure two-way communication, and enhanced information presentation along with an easy to operate and understand communication device as the Thompson reference is concerned with providing would not have referred to the Wing reference because the Wing reference is concerned with the completely different and unrelated problem of identifying a failure condition. Thus, the Thompson and Wing references would not have been combined.

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In stark contrast to the Thompson reference and the Wing reference, the Ganesan et al. reference is directed to providing a wireless access communications system which improves signal routing and decreases hardware requirements when specific applications arise (col. 2, lines 2-7), will operate in a low power application, support voice and data communications and communicate with other PCS systems (col. 2, lines 10-13), allow a set of portable subscriber units (Sus) with a single dialed number (col. 2, lines 18-20), transmit and receive both voice and data (col. 2, lines 25-27) as well as other capabilities (col. 2, line 34- col. 3, line 6).

Therefore, one of ordinary skill in the art who was concerned with providing a communication system with enhanced data handling, secure two-way communication, and enhanced information presentation along with an easy to operate and understand communication device as the Thompson reference is concerned with providing or who was concerned with identifying a failure condition in a base station as the Wing reference is concerned with would not have referred to the Ganesan et al. reference because the Ganesan et al. reference is concerned with the completely different and unrelated problem of providing a wireless access communications system which improves signal routing and decreases hardware requirements when specific applications arise.

Indeed, as explained in the previous Amendment, one of ordinary skill in the art would not have been motivated to modify the communication system disclosed by the Thompson reference which expands the capability of personal communication devices to handle different systems based upon the disclosure of the Ganesan et al. reference because the Ganesan et al. reference is not at all concerned with providing a personal communication device with the ability

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to use different systems. Thus, the references would not have been combined.

Even assuming arguendo that one of ordinary skill in the art would have been motivated to combine these references, the combination would not teach or suggest each and every element of the claimed invention.

As explained above, neither of the Thompson or Wing references teaches or suggests the features of the claimed invention including: 1) a transmitting circuit that is reconfigured afresh in relation to the mounting and demounting of the transmitting function part (claim 1); and 2) a detachable transmitting function part that conditions a transmission frequency signal received from the transmitting circuit (claims 1, 8, and 20).

The Ganesan et al. reference does not remedy the deficiencies of the Thompson reference and the Wing reference.

As explained in the previous Amendment, the Ganesan et al. reference, like the Thompson reference, does not teach or suggest the feature of a detachable transmitting module that conditions a transmission frequency signal received from the transmitting circuit. Indeed, in contrast with the present invention, the Ganesan et al. reference discloses an RF transmit section 22 which is hard wired to a database 26 within a subscriber unit 20.

Clearly, these novel features are not taught or suggested by the Ganesan et al. reference. Indeed, the Ganesan et al. reference is completely unrelated to the claimed invention.

Therefore, the Examiner is respectfully requested to withdraw the rejection of claims 2, 4, and 10.

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C. The Thompson reference in view of the Wing reference and in further view of the Crnkovic et al. reference

Regarding claims 5 and 13, the Examiner alleges that the Wing reference would have been combined with the Thompson reference and further that the Crnkovic et al. reference would have been combined with the combination of the Thompson reference and the Wing reference to form the claimed invention. Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, the references are directed to completely different matters and problems.

As explained above, one of ordinary skill in the art who was concerned with providing a communication system with enhanced data handling, secure two-way communication, and enhanced information presentation along with an easy to operate and understand communication device as the Thompson reference is concerned with providing would not have referred to the Wing reference because the Wing reference is concerned with the completely different and unrelated problem of identifying a failure condition. Thus, the Thompson and Wing references would not have been combined.

In stark contrast to the Thompson reference and the Wing reference, the Crnkovic et al. reference is concerned with the completely different and unrelated problem of attenuating an undesired signal in a portable radio transceiver (col. 2, lines 61-64) by providing a transmitter that produces an undesired signal including a frequency substantially equal to the receiver

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operating frequency (col. 3, lines 25 - 32) and electrically isolating first and second antennas from each other by a predetermined degree of electrical isolation to attenuate the undesired signal (col. 3, lines 33-38).

One of ordinary skill in the art who was concerned with providing a communication system with enhanced data handling, secure two-way communication, and enhanced information presentation along with an easy to operate and understand communication device as the Thompson reference is concerned with providing or who was concerned with identifying a failure condition in a base station as the Wing reference is concerned with would not have referred to the Crnkovic et al. reference because the Crnkovic et al. reference is concerned with the completely different and unrelated problem of attenuating an undesired signal in a portable radio transceiver. Thus, the references would not have been combined.

Moreover, even assuming arguendo that one of ordinary skill in the art would have been motivated to combine these references, the combination would not teach or suggest each and every element of the claimed invention.

As explained above, neither of the Thompson or Wing references teaches or suggests the features of the claimed invention including: 1) a transmitting circuit that is reconfigured afresh in relation to the mounting and demounting of the transmitting function part (claim 1); and 2) a detachable transmitting function part that conditions a transmission frequency signal received from the transmitting circuit (claims 1, 8, and 20).

The Crnkovic et al. reference does not remedy the deficiencies of the Thompson reference and the Wing reference.

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Rather, as explained in the previous Amendment, the Crnkovic et al. reference does not teach or suggest the feature of a detachable transmitting module that conditions the transmission frequency signal received from a transmitting circuit. Indeed, the Crnkovic et al. reference appears to disclose that the transmitter 101 generates its own transmission frequency signal using the signal generator 111 and that the remaining components of the transmitter 101 all remain within the transmitter 101.

Therefore, the Examiner is respectfully requested to withdraw the rejection of claims 5 and 13.

D. The Thompson reference in view of the Wing reference and further in view of the Lehtinen et al. reference

Regarding claims 17 and 19, the Examiner alleges that the Wing reference would have been combined with the Thompson reference and further that the Lehtinen et al. reference would have been combined with the combination of the Thompson reference and the Wing reference to form the claimed invention. Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, the references are directed to completely different matters and problems.

As explained above, one of ordinary skill in the art who was concerned with providing a communication system with enhanced data handling, secure two-way

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communication, and enhanced information presentation along with an easy to operate and understand communication device as the Thompson reference is concerned with providing would not have referred to the Wing reference because the Wing reference is concerned with the completely different and unrelated problem of identifying a failure condition. Thus, the Thompson and Wing references would not have been combined.

In stark contrast to the Thompson reference and the Wing reference, the Lehtinen et al. reference is concerned with the completely different and unrelated problem of providing a transceiver that is capable of alternately operating in frequency division duplex and time division duplex modes while keeping the number of frequency synthesizers low and reducing the time required when switching frequencies (col. 2, lines 41 - 49).

One of ordinary skill in the art who was concerned with providing a communication system with enhanced data handling, secure two-way communication, and enhanced information presentation along with an easy to operate and understand communication device as the Thompson reference is concerned with providing or who was concerned with identifying a failure condition in a base station as the Wing reference is concerned with would not have referred to the Lehtinen et al. reference because the Lehtinen et al. reference is concerned with the completely different and unrelated problem of providing a transceiver that is capable of alternately operating in frequency division duplex and time division duplex modes while keeping the number of frequency synthesizers low and reducing the time required when switching frequencies. Thus, the references would not have been combined.

Moreover, even assuming arguendo that one of ordinary skill in the art would have been

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motivated to combine these references, the combination would not teach or suggest each and every element of the claimed invention.

As explained above, neither of the Thompson or Wing references teaches or suggests the features of the claimed invention including: 1) a transmitting circuit that is reconfigured afresh in relation to the mounting and demounting of the transmitting function part (claim 1); and 2) a detachable transmitting function part that conditions a transmission frequency signal received from the transmitting circuit (claims 1, 8, and 20).

The Lehtinen et al. reference does not remedy the deficiencies of the Thompson reference and the Wing reference. Indeed, the Examiner does not allege that the Lehtinen et al. reference remedies these deficiencies of the Thompson reference and the Wing reference.

Therefore, the Examiner is respectfully requested to withdraw the rejection of claims 17 and 19.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that claims 1-20, all the claims presently pending in the Application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the Application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

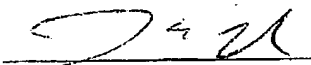
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The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

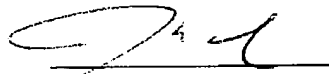
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CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that I am filing this Request for Reconsideration by facsimile with the United States Patent and Trademark Office to Examiner Thuan T. Nguyen, Group Art Unit 2685 at fax number (703) 872-9306 this 31th day of March, 2004.


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